

IN THE CLAIMS

1-31. (Withdrawn)

Sixty Seven
32. (Currently Amended) A method for implementing a heartbeat protocol, comprising: sending, directly to one or more selected servers, heartbeat messages from a single selected computer, indicating the availability of computer resources on one or more computers, such that loss of heartbeat messages from the single selected computer is indicative that all computer resources on the one or more computers are unavailable, and the presence of a heartbeat from the single selected computer is indicative that all computer resources are available; and
generating a message by the single selected computer in accordance with the heartbeat protocol to indicate availability status of the one or more computer resources.

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34. (Currently Amended) The method of Claim 32 further comprising the step of the one or more selected servers imposing at any time a minimum heartbeat period on the single selected computer.

35. (Cancelled)

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36. (Currently Amended) The method of Claim 32 further comprising the step of generating a message by the selected computer in accordance with the heartbeat protocol to indicate unavailability of the one or more computer resources; and generating an acknowledgement of unavailability message by the server to the selected computer.

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37. (Currently Amended) A method for implementing a heartbeat protocol, comprising: directly receiving heartbeat messages sent by a single selected computer to one or more selected servers, the heartbeat messages indicating the availability of resources on one or more computers, such that loss of heartbeat from the single selected computer is indicative that all computer resources are unavailable, and the presence of a heartbeat from the selected computer is

indicative that all computer resources are available;

generating a message by the single selected computer in accordance with the heartbeat protocol to indicate availability status of the one or more computer resources;

determining from the presence or absence of the heartbeat messages that all computer resources are available or unavailable; and

providing a response to a message query for the computer resources for which the heartbeat is absent that the computer resources are unavailable.

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39. (Currently Amended) The method of Claim 37, further comprising providing additional information associated with the response to the message query concerning when the computer resources is are expected to become available.

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43. (New) A method for implementing a heartbeat protocol comprising:
sending, directly to one or more selected servers, heartbeat messages from a single selected computer, indicating the availability of computer resources on one or more computers, such that loss of heartbeat messages from the single selected computer is indicative that all computer resources on the one or more computer are unavailable, and the presence of a heartbeat from the single selected computer is indicative that all computers are available;

generating a message by the single selected computer in accordance with the heartbeat protocol to indicate availability status of the one or more computer resources; and

transmitting the message to the one or more selected servers.

44. (New) A method for implementing a heartbeat protocol comprising:
directly receiving heartbeat messages sent by a single selected computer to one or more selected servers, the heartbeat messages indicating the availability of resources on one or more computers, such that loss of heartbeat from the single selected computer is indicative that all computer resources are unavailable, and the presence of a heartbeat from the single selected computer is indicative that all computer resources are available;

generating a message by the single selected computer in accordance with the heartbeat

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PATENT APPLICATION

- 1) protocol to indicate availability status of the one or more computer resources;
transmitting the message to the one or more selected servers;
determining from the presence or absence of the heartbeat messages that all computer
resources are available or unavailable; and
providing a response to a message query for the computer resources for which the
heartbeat is absent that the computer resources are unavailable.
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